References:

* Bruce, V., Green, P. R., Georgeson, M. A., & Bruce, V. e. (2003). Visual perception: physiology, psychology, & ecology. Hove; New York: Psychology Press, 2003.
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  + Review: "The new edition of this text continues to provide a detailed and up-to-date account of research on visual perception, while maintaining the emphasis of earlier editions on the functional context of vision."--Jacket.
  + pt. 1 The physiological basis of visual perception -- Ch. 1. Light and eyes -- Ch. 2. The neurophysiology of the retina -- Ch. 3. Visual pathways in the brain -- pt. II. Vision for awareness -- Ch. 4. Approaches to the psychology of visual perception -- Ch. 5. Images, filters, and features: the primal sketch -- Ch. 6. Perceptual organisation -- Ch. 7. Seeing a 3-D world -- Ch. 8. The computation of image -- Ch. 9. Object recognition -- pt. III. Vision for action -- Ch. 10. Introduction to the ecological approach to visual perception -- Ch. 11. Optic flow and locomotion -- Ch. 12. Vision and the timing of actions -- Ch. 13. Perception of the social world -- pt. IV. Conclusions -- Ch. 14. Contrasting theories of visual perception.
* Visual perception: the influence of H.W. Leibowitz / edited by Jeffrey Andre, D. Alfred Owens, Lewis O. Harvey, Jr.
  + <http://ezproxy.aut.ac.nz/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=cat05020a&AN=aut.b13670876&site=eds-live>
* Visual perception: the neurophysiological foundations / edited by Lothar Spillmann and John S. Werner.
  + <http://ezproxy.aut.ac.nz/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=cat05020a&AN=aut.b16121429&site=eds-live>
  + This book presents an interdisciplinary overview of the main facts and theories that guide contemporary research on visual perception. While the chapters cover virtually all areas of visual science, from philosophical foundations to computational algorithms, and from photoreceptor processes to neuronal networks, no attempt has been made to provide an exhaustive treatment of these topics. Rather, researchers from such diverse disciplines as psychology, neurophysiology, anatomy, and clinical vision sciences have worked together to review some of the most important correlations between perceptual phenomena and the underlying neurophysiological processes and mechanisms. The book is thus intended to serve as an advanced text for graduate students and as a guide for all vision researchers to understanding current progress outside their specialized fields of interest.
* The Analysis of Reading Skills and Visual Perception Levels of First Grade Turkish Students
  + <http://ezproxy.aut.ac.nz/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ1109427&site=eds-live>
  + […] and their visual perception levels were determined with "Developmental Test of Visual Perception-2".
* Visual culture in organizations: theory and cases / Alexander Styhre.
  + <http://ezproxy.aut.ac.nz/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=cat05020a&AN=aut.b11719230&site=eds-live>
  + Part 1. Epistemologies of Vision -- 1. Introduction: From the Lexical to the Visual -- 2. The Visual Turn in Social Science and Organization Theory -- Part 2. Practices of Seeing -- 3. Vision and Visualization in Science-Based Innovation Work -- 4. Vision and Visualization in Architecture Work -- Part 3. Concluding Remarks -- 5. The Primacy of Vision and Its Implication for Organization Theory.
* Archaeology's visual culture: digging and desire / Roger Balm.
  + <http://ezproxy.aut.ac.nz/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=cat05020a&AN=aut.b14876693&site=eds-live>
* Visual culture studies / [edited by] Marquard Smith.
  + <http://ezproxy.aut.ac.nz/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=cat05020a&AN=aut.b25739815&site=eds-live>
  + Visual Culture Studies presents 13 engaging and detailed interviews with some of the most influential intellectuals working today on the objects, subjects, media and environments of visual culture. Exploring historical and theoretical questions of vision, the visual and visuality, this collection reveals the provocative insights of these thinkers as they have contributed in exhilarating ways to disturbing the parameters of more traditional areas of study across the arts, humanities, and social sciences
* **Culture and sensory response to visual stimuli.**
  + [**http://ezproxy.aut.ac.nz/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=edswss&AN=000419370300010&site=eds-live**](http://ezproxy.aut.ac.nz/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=edswss&AN=000419370300010&site=eds-live)
  + **This study investigated the influence of culture on people's sensory responses, such as smell, taste, sound and touch to visual stimuli. The sensory feelings of university students from four countries (Japan, South Korea, Britain and France) to six images were evaluated. The images combined real and abstract objects and were presented on a notebook computer. Overall, 280 participants (144 men and 136 women; n = 70/country) were included in the statistical analysis. The chi-square independence analysis showed differences and similarities in the sensory responses across countries. Most differences were detected in smell and taste, whereas few variations were observed for sound responses. Large variations in the response were observed for the abstract coral and butterfly images, but few differences were detected in response to the real leaf image. These variations in response were mostly found in the British and Japanese participants.**
* VISUAL ATTENTION IN A VISUAL-HAPTIC, CROSS-MODAL MATCHING TASK IN CHILDREN AND ADULTS.
  + <http://ezproxy.aut.ac.nz/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=102660956&site=eds-live>
  + Summary. — Visual fixation patterns were analysed to gain insight into developmental changes in attention allocation in a cross-modal task. Two patterns that have been associated with increased task difficulty, gaze aversion and fixation duration, were recorded using an eye-tracker. In this exploratory study, 37 elementary age children ( M age 7-10 yr.) and 23 undergraduates engaged in visual-only and haptic- visual shape-matching tasks. Theoretical assumptions underlying this study are that children have greater limitations on attention capacity compared to adults, and that a task presented in the cross-modal condition would pose special demands on this capacity. A 2 × 2 (uni or cross-modal × age group) repeated-measures analysis of variance (ANOVA) was used to analyse both gaze aversion and average fixation duration. Children averted gaze significantly more during the cross-modal condition, supporting the idea that children use gaze aversion as an attention-shifting mechanism. Mean fixation duration increased for both groups in the cross-modal condition. Due to the small number and limited age range of the children as well as the limited number of task items, interpretations are made with caution.
* Aging and Haptic-Visual Solid Shape Matching
  + <http://ezproxy.aut.ac.nz/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=edswsc&AN=000405866200006&site=eds-live>
  + A total of 36 younger (mean age=21.3 years) and older adults (mean age=73.8 years) haptically explored plastic copies of naturally shaped objects (bell peppers, Capsicum Annuum) one at a time for 7s each. The participants' task was to then choose which of 12 concurrently visible objects had the same solid shape as the one they felt. The younger and older participants explored the object shapes using either one, three, or five fingers (there were six participants for each combination of number of fingers and age group). The outcome was different from that of previous research conducted with manmade objects. Unlike Jansson and Monaci (2006), we found that for most objects, our participants' performance was unaffected by variations in the number of fingers used for haptic exploration. While there was no significant overall effect of the number of fingers, there was a significant main effect of age. The younger adults' shape matching performance was 48.6% higher than that of the older adults. When perceiving naturally shaped objects such as bell peppers, it appears that the usage of a single finger can be as effective as haptic exploration with a whole complement of five fingers.
* Haptic Interventions as Visual Anthropology.
  + <http://ezproxy.aut.ac.nz/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=hgh&AN=126591221&site=eds-live>
  + This vignette was developed over the course of a practice-led research project that used haptic interventions to investigate the contemporary consumption of cultural pasts and cultural differences. This vignette presents reworking’s of unused and newly digitised archival material shot in the Persian Gulf in the 1950s and 1960s and aims to contribute to the investigation of how photographic documents shape our consciousness and thus are powerful tools. The concept of “haptic interventions” was developed on the basis of archive fieldwork, working as a participant observer with the aim of mapping the audio-visual material in its “irreducible alterity.”
* The representation of shape: understanding the role of symmetry in haptic and visual inputs
  + <http://ezproxy.aut.ac.nz/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=edsble&AN=edsble.721958&site=eds-live>
  + Shape representation of an object can be achieved by vision but also by haptics. There are many potential cues which can influence the processes of shape representation. In the PhD thesis, I present seven studies that provide new insights about the way in which haptics and vision perceive some specific spatial properties (mainly regularities) with the final goal of assessing potential cues each modality uses in order to better understand the main cues involved in the process of shape representation. The first study (Part 1, Chapter 2) showed that externalising the haptic input into a visual sketch during haptic exploration improved the recognition of raised line drawings, possibly by reducing the working memory load. The following four chapters (Part 2, Chapters 3-6) represent the core of the thesis. They investigated detection of regularities such as mirror-reflection symmetry and repetition. Despite the ubiquitous occurrence of these regularities in our environment, repetition is a spatial property which has never been investigated by haptics before.
* Haptic, visual and visuo-haptic softness judgments for objects with deformable surfaces
  + <http://ezproxy.aut.ac.nz/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=edseee&AN=edseee.4810828&site=eds-live>
  + The purpose of this study is to investigate multisensory visual-haptic softness perception using deformable objects. We created a set of rubber specimens, whose compliance varied in a controlled fashion (0.11 to 0.96 mm/N), but which were otherwise indistinguishable. Participants judged the magnitude of the stimuli according to their softness under haptic-only, vision-only and visuo-haptic conditions. In haptic and visuo-haptic conditions participants explored the stimuli without and with vision of their exploratory movements, respectively. In visual conditions, participants watched how another person explored the stimuli. Participants were well able to differentiate between the different stimuli under all three modality conditions. Stimuli were judged to be slightly softer under vision-only conditions than under haptic-only conditions; visuo-haptic judgments were in-between (average visual weight: 55%). These findings demonstrate that a) participants can reliably infer softness from indirect visual information alone-that is from watching corresponding exploratory movements and stimulus deformations-, and that b) such visual information has a major contribution to visuo-haptic softness judgments. We further observed that judgments were more variable under visual as compared to haptic conditions; the variability of visuo-haptic judgments was similar to that of haptic ones. The lack of benefit from adding visual to haptic information, and the contrast between the relatively high visual weight in visuo-haptic judgments on the one hand and the low reliability of visual relative to haptic-only information on the other hand, suggest that the integration of visual and haptic judgments was not optimal, but biased towards vision.
* Human haptic perception: basics and applications / Martin Grunwald, editor.
  + <http://ezproxy.aut.ac.nz/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=cat05020a&AN=aut.b12833514&site=eds-live>
  + Active touch perception – also known as haptic perception – is of primary importance for the planning, direction and execution of everyday actions. This most complex of human sensory systems is gaining ever more importance for various scientific disciplines as well as practical industrial applications. In this book an international team of 80 authors presents a comprehensive collection of writings on both aspects of research on human haptic perception.
* Making sense of haptics: fundamentals of perception and implications for device design / Femke Elise van Beek.
  + <http://ezproxy.aut.ac.nz/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=cat05020a&AN=aut.b25004268&site=eds-live>
  + Tele operation systems, in which robots are controlled remotely, are a potential solution to performing tasks in remote, small, and hazardous environments. However, there is a big disadvantage to these systems; as the direct connection between the human and the environment is lost and operators are deprived of their sense of touch. The recreation of touch feedback through haptic devices is a possible solution, however haptic devices are far from perfect and improving their design is usually a slow trial-and-error process. This book describes 7 scientific studies that try to break this slow loop by using a deductive approach. Through investigating fundamental properties of human haptic perception using psychophysical paradigms, general knowledge on haptic perception of force, position, movement and hardness was gained. The resulting information can be applied to many different haptic devices. Consequently haptic systems can be more easily designed in an intuitive, human-centered way.
* Discrimination threshold for haptic volume perception of fingers and phalanges
  + <http://ezproxy.aut.ac.nz/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=edswss&AN=000424292000020&site=eds-live>
  + Humans exhibit a remarkable ability to discriminate variations in object volume based on natural haptic perception. The discrimination thresholds for the haptic volume perception of the whole hand are well known, but the discrimination thresholds for haptic volume perception of fingers and phalanges are still unknown. In the present study, two psychophysical experiments were performed to investigate haptic volume perception in various fingers and phalanges. The configurations of both experiments were completely dependent on haptic volume perception from the fingers and phalanges. The participants were asked to blindly discriminate the volume variation of regular solid objects in a random order by using the distal phalanx, medial phalanx, and proximal phalanx of their index finger, middle finger, ring finger, and little finger. The discrimination threshold of haptic volume perception gradually decreases from the little finger to the index finger as well as from the proximal phalanx to the distal phalanx. Overall, both the shape of the target and the part of the finger in contact with the target significantly influence the precision of haptic perception of volume. This substantial data set provides detailed and compelling perspectives on the haptic system, including for discrimination of the spatial size of objects and for performing more general perceptual processes.
* How Humans Process Visual Information: A focused primer for designing information.
  + <http://ezproxy.aut.ac.nz/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=aft&AN=120292350&site=eds-live>
  + Data is presented identifying a major gap between two-dimensional (2D) communication modalities and actual learning of its content. It is proposed that information designers can create formats that are cognitively more effective by incorporating constructs from the cognitive sciences. In order to effectively design information for learning, an understanding of how the brain processes information is important and presented. In addition, application of cognitive constructs have the potential to guide designers in creating cognitive-based information designs (CID). Seven cognitive constructs are discussed that can directly impact the effectiveness of information formats.
* **The neural basis of binocular depth perception**
  + [**http://ezproxy.aut.ac.nz/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=edsble&AN=edsble.569746&site=eds-live**](http://ezproxy.aut.ac.nz/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=edsble&AN=edsble.569746&site=eds-live)
  + **How does the human visual system convert two-dimensional projections from our eyes into a three-dimensional percept? One primary method is from binocular disparities, which result from having two horizontally separated eyes and are used to provide a powerful cue to depth in our environment. In this thesis, I use human fMRI to investigate the cortical signals associated with binocular disparity. I address several core issues, including the relationship between cortical activity and perception, the significance of the reference plane on depth configurations, and the topography of disparity signals on the cortical surface. In measuring responses to coarse and fine disparities, researchers typically engage two respective tasks: a signal-in-noise and a feature difference task. In the first chapter, we decouple the disparity magnitude from the perceptual task and examine cortical responses to both of these tasks when using fine disparities. Further, we manipulated performance and identified visual areas whose activity varied in line with perceptual judgments. We reveal that responses in later dorsal regions VIPS and POIPS were closely related to perception for both tasks. In the second chapter, we used a similar manipulation to investigate cortical regions that have solved the correspondence problem and whose responses were consistent with the depth percept of the observer, and reveal that this takes place in V7 and VIPS. The third chapter examines the importance of the reference in disparity calculations. We performed several classifications based on depths that were considered relative to fixation or relative to the surround. We found that early visual areas were most sensitive to disparity edges; dorsal visual areas used both the fixation plane and the surround in computing disparity whereas ventral visual areas processed disparity with reference to the surround. In the fourth chapter, we attempt to identify a topographic organisation of binocular disparity in the visual cortex. We estimate the disparity preferences of each voxel in two distinct ways, and displayed these preferences on a flatmap of the cortical surface. Although we did not observe a topographic map of disparity, we observed a cluster in intermediate dorsal regions (V3A, V3B/KO, V7) that consistently showed a bias towards crossed disparities of a larger magnitude.**
* <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4901450/>
* Vergence eye movements are not essential for stereoscopic depth
  + <https://www.jstor.org/stable/43600289>
* Effects of visual noise on depth perception in landscape images
  + <http://ezproxy.aut.ac.nz/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=edseee&AN=edseee.8369666&site=eds-live>
  + The phenomenon that the response of a nonlinear system to a weak input signal is optimized by the presence of a nonzero level of noise that occurs in the visual part of our brain. In this study, our purpose is to reveal whether depth perception of photographs increases with visual noise. We conducted an experiment to evaluate the depth perception of photographs with or without visual noise. We prepared two types of visual noises with three levels of amplitude. Results show that stimuli with visual noise were more frequently selected than those without noise, while the most effective noise depended on the photograph. It was suggested that depth perception was improved by appropriate noise of appropriate strength. The most effective noise might depend on the dominant depth clues in the photographs.